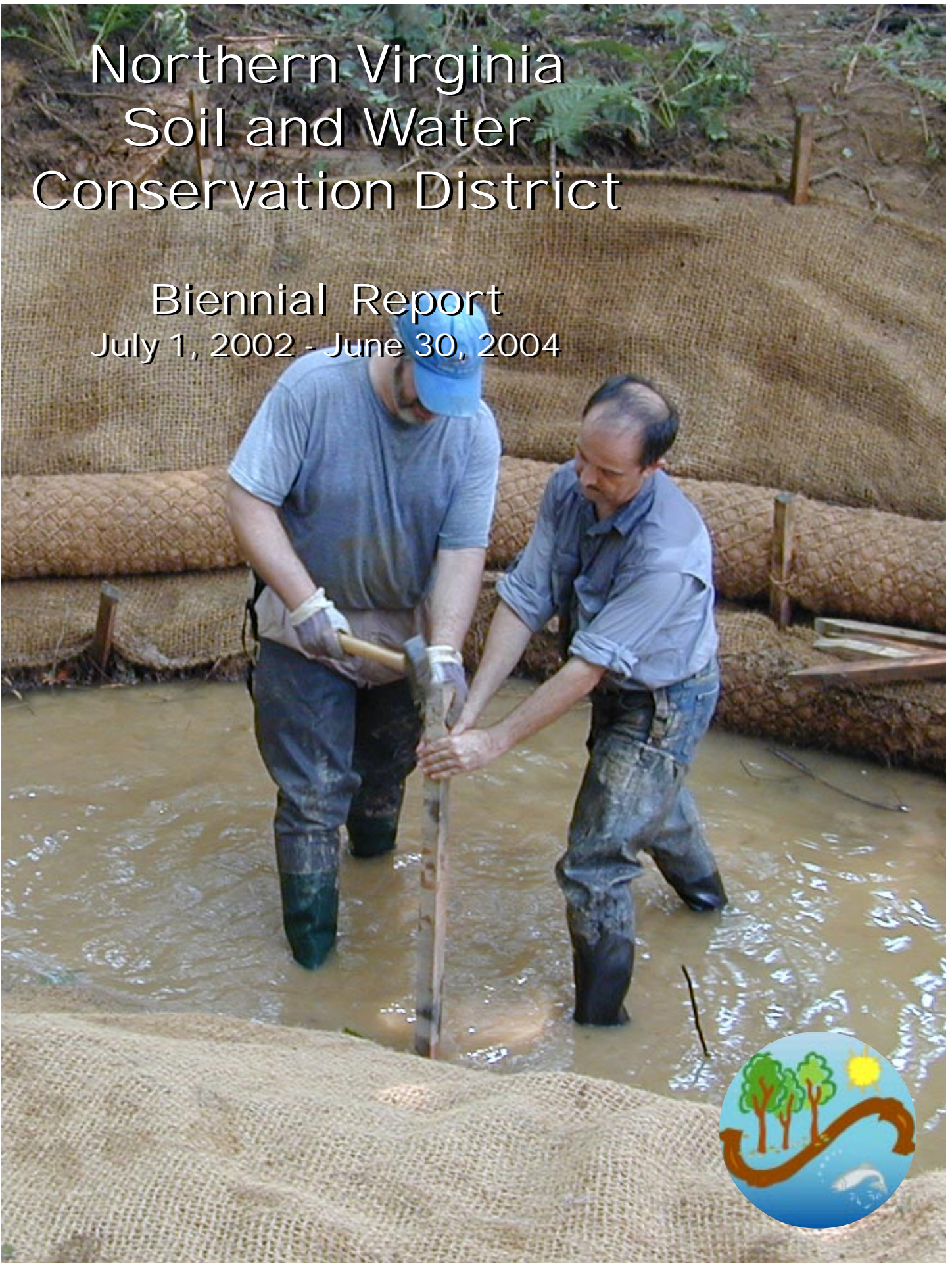


# Northern Virginia Soil and Water Conservation District

Biennial Report  
July 1, 2002 - June 30, 2004



## Board of Directors

### 2004

Jean Packard, Chair  
Sally Ormsby, Vice Chair  
Greg Evans, Secretary  
David Bulova, Treasurer  
Adria Bordas, Director

### 2003

Dewey Bond, Chair  
Jean Packard, Vice Chair  
Greg Evans, Secretary  
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Adria Bordas, Director

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Joanna Cornell, Watershed Specialist  
Diane Hoffman, District Administrator  
Nicholas Kokales, Administrative & Technical Assistant  
Asad Rouhi, Urban Conservation Engineer  
Dan Schwartz, Soil Scientist  
Willie Woode, Senior Conservation Specialist

## NRCS Staff

David Harper, Soil Scientist/Project Leader  
Garland Robertson, Soil Scientist  
Gilbert Guerrero, District Conservationist

## Associate Directors/Consultants

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Walter Hamilton	Mary Nightlinger
Christa Hellberg-Cook	Fernando Pasquel
Gloria Fisher	William W. Smith
Don Kelso	Richard Terwilliger
Robert Kohnke	Don Waye
Laura McNichol	

## Organization

The Northern Virginia Soil and Water Conservation District is a self-governing political subdivision of the Commonwealth of Virginia. Its boundaries are the same as those of Fairfax County. Founded by citizens concerned about conserving natural resources, NVSWCD is one of 47 conservation districts in Virginia and serves an area with more than a million people.

NVSWCD is governed by a five-member Board of Directors. Three directors are elected in a general election every four years, and two, including a Virginia Cooperative Extension agent serving Fairfax County, are appointed by the Virginia Soil and Water Conservation Board.

The NVSWCD Board of Directors meets the fourth Tuesday of every month. Directors serve without pay but are reimbursed for expenses related to district activities.

NVSWCD has been Fairfax County's partner for 60 years. Our technical and educational programs are made possible by funding and administrative support from Fairfax County, the Commonwealth of Virginia through its Department of Conservation and Recreation, and various public and private grants. Assistance also comes from the USDA's Natural Resources Conservation Service (NRCS) and other partners.

## Vision

We envision a Fairfax County with clean streams and protected natural resources.

## Mission

Our mission is to lessen the impact of urban/suburban activities on our land and water resources in Fairfax County—vital components of the Chesapeake Bay Watershed. We achieve this through effective leadership, technical assistance, and outreach programs in collaboration with government, industry, and the public.



# Letter from the Chair

In 2003, relentless spring and summer rain played havoc with yards and basements. Homeowners turned to the conservation district in record numbers for advice on how to deal with poor grading, misdirected rain gutters, mosquitoes, polluted runoff, dry wells, french drains, trenches, clay soil, exposed tree roots, sump pumps, and much more. In 2004, there has been a little less rain, but the calls for help have not abated.

With dozens of inquiries coming in every week and limited staff available to address these problems, the conservation district almost has become a victim of its own success. The better we have publicized our skills and services and the more often we have proven to be an expert resource, the more challenging it has become to meet with individuals and associations to help them resolve their landscape issues. Not that we're complaining!

At a time when local and state budgets are straining to keep up with community needs, we continue to run a tight ship with a highly educated and committed staff and an active, supportive board of directors.

The past two years were exciting for us. The Fairfax County soil survey got underway, promising to modernize and complete an arduous task that was started almost 50 years ago. Our staff worked with homeowner associations, schools, and parks to use innovative bioengineering techniques to stabilize streams and manage stormwater onsite. We documented and promoted the progress of a green roof project to help the concept gain exposure and acceptance among county policy makers, the development community, and the general public.

All around us, we've seen steps being taken to help protect our natural resources. Fairfax County has begun adopting and promoting comprehensive watershed plans that include innovative solutions to managing stormwater; new avenues for citizen involvement in watershed protection; and an aggressive, ecologically balanced approach to repairing degraded stream channels.

We will continue to partner with Fairfax County to reach our mutual conservation goals.

Sincerely,

**Jean R. Packard**



*Seriously eroding streams often encroach into backyards causing homeowner concerns.*



*Staff assist homeowner associations in solving community-wide drainage problems.*



*Staff reviews erosion and sediment control plans before walking a construction site.*



*Members of Madison High School's Envirothon team study a watershed map during the competition.*



*Government Center stormwater management pond undergoes major rehabilitation. NVSWCD designed the pond retrofit to increase detention time and pollutant removal.*

## Technical Assistance

### Fiscal Year 2003

Pond inquiries/visits .....	64
Soils inquiry responses .....	267
Visits to homeowners .....	174
Assistance via telephone .....	287
Site plans reviewed for E&S and SWM .....	56
Rezoning/special exceptions reviewed .....	225
Agricultural parcels planned .....	9
Acreage .....	538
RPAs protected (linear ft) .....	3,480

### Fiscal Year 2004

Pond inquiries/visits .....	50
Soils inquiry responses .....	225
Visits to homeowners .....	256
Assistance via telephone .....	366
Site plans reviewed for E&S and SWM .....	65
Rezoning/special exceptions reviewed .....	212
Agricultural parcels planned .....	16
Acreage .....	965
RPAs protected (linear ft) .....	25,648

# Technical Assistance

Although Fairfax County is an urbanized area, county residents enjoy the benefits of a glorious park system, numerous lakes, and lush green space in many established communities.

At the same time, the less appealing side of urbanization affects us, too. Trees are disappearing in new and infill developments, backyards and slopes are eroding, streams are downcutting, and neighbors are bickering about whose downspout points where.

The Northern Virginia Soil and Water Conservation District fills a niche in Fairfax County, serving as an expert advisor, an impartial arbiter, and a hands-on participant in community activities.

## Stormwater Management

In the past two years, we took on several stormwater management initiatives including stream restoration, pond retrofitting, and bioretention projects. Staff also documented and promoted innovative projects of other agencies and organizations including the conversion of a farm pond to a water quality pond at Mason District Park.

A good example of a stream restoration project is one on Snakeden Branch in Reston, which brought together the district, Virginia Department of Forestry, the county's Maintenance and Stormwater Management Division, and the Reston Association. The banks of a 200 foot stretch of the stream were severely eroded, exposing the roots of many large trees. District staff designed and worked with its partners to implement a plan that called for regrading the banks to a gentler slope, installing a rock cross vane to narrow the flow path to the center of the channel, and installing biodegradable matting to hold the

soil in place until the roots of native grasses and other riparian plants grow sufficiently to stabilize the bank. The project also included the installation of a two-tier row of biodegradable logs at the toe of the bank to further protect the bank from erosion until the root network of plants is established within and behind the “biologs.”

## Input on Land Use

The district continues to review rezoning applications. Following a visit to each site, a comprehensive report is prepared, with special attention paid to the natural characteristics of soil types and to the potential impacts of the proposed land use change on natural resources, such as wetlands, streams, and resource protection areas.

The district also reviews the erosion and sediment control and stormwater management aspects of certain site development plans for the county, consultants, and citizen groups.

As it has for the past two decades, staff served as judges in the county’s annual Land Conservation Awards Program, which recognizes the building industry for excellence in installing and maintaining erosion and sediment controls. In 2003, the district began conducting two judging sessions, one in the spring and a second in the fall.

## Agriculture

In addition to addressing urban/suburban issues, the district plays a role in agricultural concerns. Agriculture in Fairfax County is mainly managing horse operations. The district assists in soil and water quality conservation planning for agricultural land users. Having an operational plan puts them in compliance with the Chesapeake Bay Preservation Ordinance. The ordinance aims to improve



*NVSWCD staff visited a construction site and took note of the thick, well-established stand of grass surrounding this sediment trap with pipe outlet.*



*Ponds and streams at horse operation sites are fenced off to enhance vegetated buffers that filter pollutants from runoff and to protect the edges and banks from erosion that can be caused by the trampling feet of the animals.*



# Sample of Special Projects

FY 2003

- Rachel Carson Middle School: Designed a pond for the purpose of aquatic studies.
- Potomac High School: Designed a rain garden to manage stormwater.
- Lake Martin: Advised the county and a consultant on an upstream mitigation plan.
- Bureau of Land Management: Worked with BLM planning team on proposed activities at Meadowood Farm.
- Blueberry Hill HOA: Advised HOA on how to address stormwater management and erosion problems.
- Westmoreland Square HOA: Advised HOA on how to handle erosion and drainage problems.
- Hemlock Overlook Park: Prepared a restoration and wildlife enhancement plan.
- PL-566 dams: Participated in the annual inspection of six structures in the Pohick Creek Watershed.



*A cooperative housing development seeks advice on managing stormwater.*

water quality in the bay by reducing the amount of nonpoint source pollutants entering the bay and its tributaries.

The district provides incentives for land owners to install water quality improvement practices through the Virginia Agricultural Best Management Practice Cost Share and Tax Credit programs.

The district also develops plans for Agricultural and Forestal Districts and reviews and approves soil and water quality conservation plans for golf courses and plant nurseries.

## Homeowner Assistance

Homeowner visits continue to get staff attention. With increased development and the resulting increase in imperviousness—particularly infill development of sites with poor soils and steep slopes—Fairfax County residents are seeing more runoff that causes erosion and ponding of water on their property.

Proposed solutions range from simply planting groundcover to extending downspouts, building berms, and installing french drains.

For example, a homeowner who has lived for decades at her home in a community built in the 1950's contacted the district in June with drainage concerns. Many years ago, she had encountered a drainage problem, which she addressed by installing a sump pump at the lowest level of her stairwell. Recently, parcels of land abutting two sides of her property were redeveloped, generating increased runoff to her property. Faced with new drainage problems including a wet basement and soggy yard, the homeowner called the conservation district for help. The district staff studied the soil type and drainage pattern, called in the developer and the county's building site inspector, and proposed a system of berms, catch basins, and underground piping that would intercept the runoff and divert it around the house and into the roadside channel.

# Soil Survey

With funding from the county, NVSWCD hired a soil scientist to join the federal soil survey team. A soil survey is a collection of maps, tables, and written text that can be used for land use planning. It contains predictions of soil behavior and suitability for selected land uses.

The Fairfax County soil survey, published in 1963, is being updated by the USDA's Natural Resources Conservation Service in partnership with the district and the county. NRCS (formerly Soil Conservation Service) conducted the original soil survey prior to the adoption of a modern system of classifying and interpreting soils. It was based on field work completed in 1955 and covered about 60% of the county.

The updated soil survey will reclassify the soils and provide updated interpretive information. More accurate soil boundaries will be plotted on the maps where necessary, and the remainder of the county that was not surveyed in the 1963 soil survey will be mapped. In addition, significant effort will be made toward classifying and interpreting soils disturbed by development. Generally, NRCS soil surveys mark such disturbed soils as "un-rated" and assign them no interpretive information. However, since so much of Fairfax County has been disturbed, as much information as is practical will be collected to help describe these soils, including bulk density, resistance to penetration, infiltration and percolation rates, profile descriptions, and shear strength.

The new soil survey will be published electronically as a GIS layer. It will not be available in paper form. This will minimize the time between the completion of field and compilation work and the survey's availability to the public. The electronic format also will increase accessibility of the soil survey, since it will not be available exclusively at NVSWCD. In addition, the soil survey will be overlaid on new aerial photographs that will allow for easier location of the user's area of interest.



*Augers are used to take soil samples.*

## Soil Data

(since November 2002)

- Reported and compiled 83,000 acres
- Bored 2,572 transect holes\*
- Performed a full description down to 60 inches on 452 transect holes.

\* A transect hole is the basic unit of data measurement. The transect hole does not have to be dug to any specific depth; rather it must be just deep enough to allow the soil scientist to observe enough properties of the soil to accurately identify it.

# Sample of Special Projects

FY 2004

## Lorton Arts Center

The purpose of the redevelopment is to turn 55 acres and existing buildings at the former Lorton prison site into a world class art center. The district secured a grant in partnership with a private consultant to assess the proposed redevelopment site plan and determine the suitability of implementing an alternative stormwater management plan that incorporates Low Impact Development techniques.

## Little Pimmit Run Stream Bank Stabilization Project

The district reached an agreement with two homeowners, the Fairfax County Park Authority, and a private consultant to restore an eroded bank along 300 linear feet of the stream. The stream is on park property but impacts private property. The district will assist the consultant in designing the restoration plan, hiring a contractor, and managing the construction process. The homeowners will bear full responsibility for the cost of the project.

## Kinder Property Water Quality Improvement Project

Mr. Kinder violated the Chesapeake Bay Ordinance by building a long retaining wall on the North Branch of Little Hunting Creek. At the county's request, the district advised Mr. Kinder and his engineers on the best way to remove the retention wall and find an environmentally sound solution to stabilize the stream bank.

## Glencarlyn Park Stream Bank Stabilization Project

Approximately two hundred linear feet of the Long Branch stream where it intersects Four Mile Run was highly eroded. The district did all the measurements and surveys, prepared the final design, and supervised the construction work to stabilize the stream.

## Meadowood Farm Composting Pad

The district designed and sited a windrow composting pad as a demonstration project showing how to better manage horse manure.

## Yorktowne Square Rain Garden

The district designed and installed, with help from a county crew, a rain garden to overcome an existing drainage problem within the community. The rain garden controls and treats runoff from .56 acres of rooftops, parking lots, and lawns. The rain garden consists of a planting soil layer and two filter layers and is equipped with an under-drain system. The surface area of the rain garden is 600 square feet.

## Snakeden Branch Stream Bank Stabilization Project

The banks of a 200-foot stretch of stream were severely eroded, exposing the roots of many large trees. The restoration project marked the start of the implementation phase of the Reston Association's watershed management plan.





*At top left, NVSWCD oversees the installation of biologs and biodegradable matting on the bank of Four Mile Run.*

*At center left, NVSWCD, with assistance from the Virginia Department of Forestry, installed biodegradable matting and a double tier of biologs on both banks of Snakeden Branch.*



*Above, a staff member measures the depth of an eroded channel to help determine a bank stabilization plan.*



*The photo at bottom left shows rain garden construction at Yorktowne Square Condominiums. The light area is the second layer of gravel. The dark area is a special soil that has good drainage capacity and is a nutrient-rich plant growing medium.*

# Cooperator of the Year

## 2003—Diana Saccone

NVSWCD named Diana Saccone, Reston Association's Watershed Manager, as its 2003 Cooperator of the Year.

Saccone is a certified stream monitor who promotes the district's monitoring program in the Reston area, coordinating sites and train-

ing and certifying other volunteers.

Saccone is the Reston Association's point person for watershed education and launched the Reston Watershed Action Group.



She leads watershed cleanups and watershed walks and assists the district in many educational and outreach programs at public events and in high schools.

Most recently, Saccone worked closely with district staff in restoring a highly eroded 200-foot stretch of Snakeden Branch. This project marks the start of the implementation phase of the Reston Association's new watershed management plan. Saccone was a key figure in the development of that plan.

## 2004—Jeanette Stewart

Jeanette Stewart, education director for EcoStewards Alliance, is NVSWCD's 2004 Cooperator of the year. Jeanette not only is an advocate for the environment, she is a model for environmental stewardship.

NVSWCD staff has taught Stewart much about stream restoration, stormwater management concepts, and rain gardens. In return, she has enhanced the district's visibility by giving us design and implementation opportunities and expanding our outreach and education programs.



Some of our cooperative projects include the large rain garden at Yorktowne Square, smaller rain gardens at Daniels Run Elementary School, and nonpoint source pollution education materials.

In addition to her work with the district, Stewart has influenced thousands of school children and teachers in northern Virginia who have participated in her original *Sharing Our Space* earth-based educational lessons.

Stewart created a 10,000 square foot certified backyard wildlife habitat at Yorktowne Square. She also is responsible for the installation of a green roof at Yorktown Square. The green roof serves as a demonstration project, attracting public officials and community groups from across Virginia.



# Outreach

## Newsletter

The district continues to publish its bimonthly newsletter, *Conservation Currents*, for distribution to homeowner and civic associations, government officials, environmental organizations, schools, libraries, and interested individuals. Many of these articles are reprinted in homeowner association newsletters and on various websites.

Topics in 2003 included the preliminary steps toward building a backyard pond, a stormwater pond retrofit in the Mason District, a green roof at a condominium development, stream resto-

ration on Snakeden Branch in Reston, poison ivy, English ivy, erosion, and nonpoint source pollution. In 2004, the newsletter included articles on garter snakes, lawn care, soil judging, perennial stream mapping, watershed-friendly landscaping



techniques, phytoremediation, solid waste management, litter in stormwater management structures, vernal pool breeders, integrated pest management, formation and classification of soil, and the usual reminder about picking up pet waste.

## Website

The district's website gains more visitors every month and is frequently linked from other sites. In a typical month in 2003, the site drew 3,000 to 4,000 visitors. In 2004, the number of monthly visitors often came close to 5,000.

With the heavy spring rains in 2003, property

NVSWCD's newsletter and website both ranked number one in an annual competition sponsored by the National Association of Conservation Districts, which represents the nation's 3,000 conservation districts.



District staff assisted Jeanette Stewart in designing two rain gardens at Daniels Run Elementary School. Stewart hand-lettered and illustrated several signs to explain the different Bay-friendly landscaping techniques she has implemented at the school.



# Public Outreach

## Fiscal Year 2003

Public info inquiries .....	617
Printed info distributed .....	3,898
News releases issued .....	15
Annual report circulation .....	500
Seedlings pkg sold/total seedlings .....	450/6,300
Newsletter circulation .....	2,600 bimonthly
Enviroscape presentations/audience .....	5/376
Storm drain stenciling projects/households educated ...	2/740
Presentations to groups/attendance .....	11/656
Seminars/attendance .....	9/615
Overall volunteer hours .....	2,493
Web pages online .....	128
Web site visitors avg per month .....	4,466
Events and exhibits/visitors .....	11/1,660

## Fiscal Year 2004

Public info inquiries .....	833
Printed info distributed .....	4,251
News releases issued .....	16
Announcements on the Web .....	50
Seedling pkgs sold/total seedlings .....	400/5,600
Newsletter circulation .....	2,500 bimonthly
Enviroscape presentations/audience .....	18/460
Presentations to groups/attendance .....	13/532
Seminars/attendance .....	2/175
Overall volunteer hours .....	4,560
Web pages online .....	160
Web site visitors avg per month .....	5,176
Exhibits/visitors .....	14/1,657

owners turned to the district's online version of *You and Your Land, a Homeowner's Guide for the Potomac River Watershed*. Up to 800 visitors per month clicked on the Erosion and Drainage chapter. The 84-page guidebook, published in 1997, is still available in print.

### Envirothon

NVSWCD sponsored two teams in the 2003 Envirothon, a natural resources competition for high school students. Students from Hidden Pond Nature Center in Springfield and James Madison High School in Vienna became experts in aquatics, forestry, soil, wildlife and the special topic of agricultural land preservation. The teams competed at a regional Envirothon held on April 26 at Montpelier, the Virginia home of President James Madison. Both teams placed in the top three of nine competing teams, earning handsome trophies.

In 2004, NVSWCD hosted a runoff among teams from Hidden Pond, James Madison, and Thomas Jefferson High School for Science and Technology at Wakefield Park in Fairfax County. The Madison team went on to represent the district in the regional and state competitions. The 2004 special topic was natural resource management in the urban environment.

### Scholarship

Stefanie Gera, a senior at Lee High School in Springfield, won a \$1,000 college scholarship from the Educational Foundation of the Virginia Association of Soil and Water Conservation Districts. NVSWCD selected Gera from among several Fairfax County seniors who submitted applications to the district for consideration. Each of Virginia's 47 conservation districts was allowed to forward one application.

### Science Fair

District directors, staff, and associates annually

judge conservation related projects at the Fairfax County Regional Science and Engineering Fair held at Robinson Secondary School. In 2003, the winning projects covered various topics related to water quality, including stream chemistry and biology, wetlands, and fecal source tracking. In 2004, the winners studied other water quality issues including the effect of nitrogen on plant growth and the effect of aquatic plants on polluted water.

### Storm Drain Stenciling

NVSWCD taught several scout and homeowner groups how to conduct storm drain stenciling projects. Volunteer participants stencil storm drains with a "Dumping Pollutes" message after distributing nonpoint source pollution information to each home in the affected neighborhood. The program has proven to be an effective, low-cost method of educating large segments of the population about water quality problems in our streams, lakes, rivers, and bay.

### Seedling Sale

Our annual seedling sales were huge successes. Based on customer feedback from previous sales, the district selected for 2003 shade tolerant species native to Virginia.

Widespread publicity from local media, public libraries, county park facilities, the Board of Supervisors and the Native Plant Society—coupled with our own newsletter and



*Scout groups often conduct storm drain stenciling projects for their conservation badges or Eagle and Gold awards. The goal of the stenciling project is to inform the public about the dangers of dumping anything into a storm drain.*



*Envirothon teams must be able to answer questions about animals and their habitat.*



# Top 20 Web Pages

Visitor statistics are reported monthly for NVSWCD pages on the Fairfax County website. NVSWCD has approximately 160 pages on the web. Below, for comparative purposes, are the top 20 pages, by number of visitors, for the month of May in the years 2003 and 2004.

## MAY 2003

Page	Visitors
1. You and Your Land - Soils and Drainage .....	455
2. Homepage .....	454
3. Building a Farm or Amenity Pond .....	262
4. You & Your Land - Landscaping and Gardening .....	163
5. Ponds .....	156
6. Frequently Asked Questions .....	154
7. Drainage and Erosion .....	134
8. 2003 Seedling Sale .....	126
9. Soils Information .....	119
10. You & Your Land - Beyond Your Backyard .....	115
11. Volunteer Stream Monitoring .....	108
12. Conservation Currents Index .....	101
13. Cigarette Butt Litter .....	101
14. You and Your Land - Introduction .....	93
15. Pamunkey - State Soil of Virginia .....	89
16. Storm Drain Stenciling .....	87
17. Announcements .....	85
18. Location and Directions .....	84
19. Who We Are .....	80
20. Agriculture and Horses .....	78

## MAY 2004

Page	Visitors
1. Homepage .....	804
2. Building a Farm or Amenity Pond .....	232
3. You and Your Land - Soils and Drainage .....	215
4. Frequently Asked Questions .....	201
5. Native Seedling Sale .....	194
6. Volunteer Stream Monitoring .....	192
7. Soils Information .....	190
8. Ponds .....	168
9. Conservation Currents Index .....	158
10. Drainage and Erosion .....	155
11. Location and Directions .....	142
12. Who We Are .....	137
13. You and Your Land - Introduction .....	129
14. Garter Snakes .....	123
15. Agriculture and Horses .....	116
16. Solid Waste Management .....	112
17. Announcements .....	110
18. Cigarette Butt Litter .....	104
19. Water Quality Stewardship Guide .....	101
20. Storm Drain Stenciling .....	99

[www.fairfaxcounty.gov/nvswcd](http://www.fairfaxcounty.gov/nvswcd)



website promotion—prompted us to increase our supplies twice during the sales period to meet the demand. In 2004 the district offered a similar sun-shade package for sale. The proceeds benefit the district's science fair and Envirothon programs.

## Partnerships

NVSWCD works in partnership with other agencies to further its mission of protecting land and water resources in Fairfax County.

For example, the Potomac River Greenways Coalition, in partnership with NVSWCD, Fairfax County Department of Public Works and Environmental Services, Potomac Conservancy, and Audubon Naturalist Society sponsored a free Master Watershed Steward Program for county residents interested in learning about watersheds and how to protect streams that flow into their sources of drinking water—the Potomac River and Occoquan Reservoir.

The program consisted of eight evening sessions focusing on technical and organizational information related to watershed management. NVSWCD staff presented at several of the sessions. Participants gained a firm understanding of watersheds, stream restoration, and management plans as well as how to organize communities for watershed protection.

Fifty-four residents completed all of the program requirements, including 24 hours of volunteer service in their watershed, and became certified as master watershed stewards.

Citizens for Water Quality is a statewide consortium of citizen groups, agencies, businesses, and individuals interested in preserving and enhancing the water resources in Virginia. It advocates for clean water in all regions of the state—from



*Former NVSWCD Chair Dewey Bond presents Crystal Clough with a plaque for her outstanding science fair project. Abstracts from three years of winning projects are featured on the NVSWCD website at [www.fairfaxcounty.gov/nvswcd/sciencefair.htm](http://www.fairfaxcounty.gov/nvswcd/sciencefair.htm).*



*You and Your Land, A Homeowner's Guide for the Potomac River Watershed is available in its entirety on the NVSWCD website at [www.fairfaxcounty.gov/nvswcd/youyourland/intro.htm](http://www.fairfaxcounty.gov/nvswcd/youyourland/intro.htm). For the calendar year of 2003, the soils and drainage chapter of You and Your Land had 5,942 visitors.*

# Green Breakfast

NVSWCD facilitates a bi-monthly gathering to discuss environmental topics in a casual setting on a Saturday morning.

## 2003 Programs

- Fairfax County Watershed Management Initiative and Stream Mapping Program
- Tree Preservation in Fairfax County
- Report of the New Millenium Occoquan Watershed Task Force
- The Role of Regional Ponds in Fairfax County's Watershed Management

## 2004 Programs

- Environmentally Friendly Lawn Maintenance
- Erosion and Sediment Controls during Construction
- Air Quality—Can We Meet the Standards?
- Land Conservation Programs

## Volunteer Stream Monitoring

Active monitors (avg per season) .....	97
Sites monitored (avg per season) .....	43
Training sessions (avg per year) .....	50
Emailed bulletins to monitors (avg per year) .....	35
Educational events (avg per year) .....	25
Volunteer hours (avg per year) .....	2,946

the estuaries and inlets of the Chesapeake to the mountain streams of the Appalachian range. The organization's main goals include fostering communication across the state, building partnerships, and supporting citizen monitoring data.

NVSWCD participates on the steering committee, assists with meeting planning, agendas, speaker selection, and logistics. Staff also presents about successful outreach techniques and the volunteer monitoring program.

Working in partnership with Fairfax County and Reston Association, NVSWCD presented posters at two national conferences. The posters depicted effective partnerships for successful volunteer stream monitoring and enhanced water quality data collection and analysis.

The district also helps with citizen education programs that are a part of the planning effort in each watershed. For example, staff made a presentation about stream stabilization and restoration techniques to citizens in the Little Hunting Creek watershed and about best management practices for horse operations to citizens in the Popes Head Creek watershed.

The Lake Barcroft Watershed Improvement District (LBWID) was formed in 1973 under the auspices of NVSWCD. The district appoints the three trustees who oversee the management and maintenance of the dam structure and the lake, including periodic dredging of sediment. The LBWID continues to distribute copies of a CD-ROM it published, which has comprehensive information about innovative BMPs and related watershed protection information.

## Stream Monitoring

Volunteers make a difference in our environment by monitoring the health of local streams.

County and state officials use the data to assess the overall stream conditions and help determine watershed management initiatives.

NVSWCD trains volunteers to assess ecological conditions in streams based on the abundance and diversity of benthic macroinvertebrates (aquatic insects and crustaceans). Volunteers also learn how to take chemical measurements for nitrate/nitrite and turbidity and to assess habitat. Training includes indoor and field workshops and mentoring by experienced monitors.

The stream monitoring program has been recognized at the state level as a prototype for monitoring programs. Water quality data collected by volunteers complements the data collected by county staff and is available for watershed planning groups.

In the past year, NVSWCD added new educational experiences for volunteers. Staff teamed up with the Audubon Naturalist Society and ecologists from Fairfax County's Stormwater Planning Division to lead watershed walks around the county. The walks provide adults and children an opportunity to see first-hand stream-related issues such as eroded banks, invasive species, and declining wildlife habitat.

We also facilitated the formation and expansion of several citizen watershed groups that have raised public awareness about, and participation in, watershed issues. We continue to work with these groups to promote local stream stewardship.

Until 2004, the Volunteer Stream Monitoring Program monitored only streams with rocky bottoms and riffles, areas where water flows swiftly over the rocks. Early this summer volunteers re-



*Stream monitors use a "kick seine" net to assess the biological health of streams with rocky bottoms and riffles, areas where water flows swiftly over the rocks.*



*Volunteers monitor a coastal stream using a different net and protocol than that used by rocky bottom stream monitors.*





*NVSWCD conducts watershed walks in partnership with Fairfax County's Stormwater Planning Division and the Audubon Naturalist Society.*

## Partnerships

Board and staff serve on many committees and participate in a variety of activities with partner organizations, county agencies, regional and state associations.

- Fairfax County Tree Commission
- Fairfax County Engineering Standards Review Committee
- Fairfax County Environmental Coordinating Committee
- Fairfax County Regional Pond Subcommittee
- Occoquan Policy Board and Technical Advisory Committee
- New Millenium Occoquan Task Force
- DPWES Stormwater Management Strategic Planning
- Fairfax County and DPWES Web Developer Teams
- Potomac Council and Potomac Watershed Roundtable
- Virginia Association of Soil and Water Conservation Districts
- DPWES Stream Project Scoping Team
- NoVA Regional Commission Outreach Campaign
- Meadowood Farm Planning and Operations Team
- Fairfax Watershed Network
- Lake Barcroft Watershed Improvement District

ceived training in a recently developed and approved method for monitoring coastal streams, which have a different range of organisms and require a different sampling net. Since then, volunteers have monitored two sites with the new method. The district hopes to add new coastal sites to its monitoring program over time. In general, coastal streams are located east of I-95 in Fairfax County.

The district continued its partnership with George Mason University's New Century College Program. In 2003, the professors integrated watershed concepts into the foundation of a freshman course, *Citizen as Self*. Students were required to participate in stream monitoring, stream clean-ups, watershed walks, and restoration events. For the upper level *Conservation Studies* course, each student interned 40 hours with an environmental organization. NVSWCD's interns demonstrated the Enviroscope watershed model to elementary and high school students and conducted a survey of past recipients of our technical services.

The district works with several high schools on stream monitoring and other watershed education programs. In turn, several high school students help out with the program by editing a newsletter, leading watershed programs for children, assisting with monitoring training sessions, and entering and analyzing monitoring data.

Many of the stream monitors have become involved with watershed management planning in their local watersheds. Their first-hand knowledge of the watershed makes them ideal candidates to serve on the planning committees.

The district supports and organizes a spring cleanup in partnership with the Alice Ferguson Foundation and a fall cleanup in partnership with Clean Virginia Waterways. The number of participants in the cleanups increases every year.

# Friends

## Joe Chudzik

Joe Chudzik's commitment to cleaning up and protecting Pohick Creek seemingly is endless. For many years, Chudzik has lead the Mason Neck community in several conservation efforts, including initiating an Adopt-A-Stream program for Pohick Creek in Lorton, conducting several storm drain stenciling projects in homeowner associations within the Federation of Lorton Communities, and coordinating reforestation efforts. Chudzik also is a certified stream monitor in our volunteer monitoring program. He has received numerous awards from civic organizations and government officials in recognition of his leadership and dedication. Chudzik recently was named by the county Board of Supervisors as a "Lord Fairfax" in the Mount Vernon District for his conservation activities.



*Joe Chudzik receives a plaque from NVSWCD Chair Jean Packard for his activities in the Pohick watershed.*



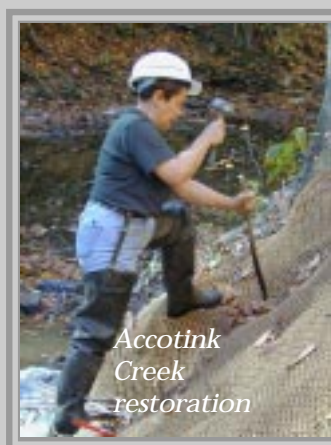
*Ned Foster leads Little Rocky Run litter cleanups*

## Ned Foster

Ned Foster formed the Friends of Little Rocky Run two years ago to "maintain and improve the ecological viability of Little Rocky Run and the surrounding watershed so that the human, native plant and native animal communities can thrive and interact in a sustainable way." He coordinates a committed group of volunteers and maintains an informative website about the group's activities. He works with partners, such as NVSWCD, Audubon Naturalist Society, and county agencies including the Department of Public Works and Environmental Services and the Health Department, on real and potential problems. Foster provides a model of how citizens can work in partnership with the county to protect natural resources. In 2004 he received the county's Environmental Excellence Award. [www.friendsoflittlerockyrun.com](http://www.friendsoflittlerockyrun.com)

## Judy Okay

For more than ten years, Judy Okay's hands-on contributions have helped raise public awareness of conservation issues and improve the environment for all residents of Fairfax County. She teams up with the district in planning and implementing stream restoration and rain garden projects. She regularly assists the district with promoting the spring seedling sale, evaluating college scholarship applications, assessing erosion and sediment controls for the Land Conservation Awards, and teaching forestry concepts to high school students participating on Envirothon teams.



*Accotink Creek restoration*



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